MATHEMATICS SAMPLE #1

K-3 Mathematics Standards of Learning Achievement Record

Student Name: _____

School: _____ School Year: Grade K:____ Grade 1:____ Grade 2:____ Grade 3:____

Levels of Performance Scoring Rubric:

4. Exceeds the Standard (Student demonstrated knowledge and skills 94% or more of the time.)
3. Meets the Standard (Student demonstrated knowledge and skills 80% or more of the time.)
2. Partially Meets the Standard (Student demonstrated knowledge and skills 70% or more of the time.)
1. Inadequate or No Understanding of the Standard (Student demonstrated knowledge and skills less than 70% of the time.)

RECORD OF INTERVENTION / REMEDIATION SERVICES		
DATE	**EXPLANATION OF SERVICES AND RESULTS**	**DURATION**

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
	◆ Number & Number Sense		◆ Number & Number Sense		◆ Number & Number Sense		◆ Number & Number Sense	
Counting	**K.1** The student, given two sets containing 10 or fewer concrete items, will identify and describe one set as having more, fewer, or the same number of members as the other set, using the concept of 1 to 1 correspondence.		**1.1** The student will count objects in a given set containing between 10 and 100 objects and write the corresponding numeral.		**2.5** The student will count by twos and fives to 100 and by threes and fours to 96, using mental mathematics, paper and pencil, hundred chart, calculators, and / or concrete objects.			
	K.2 The student, given a set containing nine or fewer concrete items, will a) tell how many are in the set by counting the number of items orally; b) select the corresponding numeral from a given set; and c) trace over the numeral using tactile materials (e.g., sand, sandpaper, carpeting, or finger paint).		**1.3** The student will count by twos, fives, and tens to 100.					
	K.4 The student will investigate and recognize patterns from counting by fives and tens, using concrete objects and a calculator.		**1.7** The student will count a collection of pennies, a collection of nickels, and a collection of dimes whose total value is 100 cents or less.					
	K.5 The student will count forward to 20 and backward from 10.							
	K.6 The student will determine the value of a collection of pennies, using pennies or models.							

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
	◆ Number & Number Sense		◆ Number & Number Sense		◆ Number & Number Sense		◆ Number & Number Sense	
Place Value			**1.2** The student will group concrete objects by ones and tens to develop an understanding of place value. **1.4** The student will recognize and write numerals 0 through 100.		**2.1** The student will identify the place value of each digit in a three-digit numeral, using numeration models.		**3.1** The student will read and write six-digit numerals and identify the place value for each digit. **3.2** The student will round a whole number, 999 or less, to the nearest ten and hundred.	
Ordinality	**K.3** The student, given an ordered set of three objects and / or pictures, will indicate the ordered position of each item, from left-to-right, right-to-left, top-to-bottom, and / or bottom-to-top.		**1.5** The student will identify the ordinal positions first through tenth, using an ordered set of objects.		**2.3** The student will identify the positions first through twentieth, using an ordered set of objects.			
Comparing Number					**2.2** The student will compare two whole numbers between 0 and 999, using symbols (>, <, or =) and words ("greater than," "less than," or "equal to").		**3.3** The student will compare two whole numbers between 0 and 9,999, using symbols (>, <, or =) and words ("greater than," "less than," or "equal to").	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
Fraction and Decimal Concepts			**1.6** The student will identify and represent the concepts of one-half and one-fourth, using appropriate materials or a drawing.		**2.4** The student will identify the part of a set and/or region that represents one-half, one-third, one-fourth, one-eighth, and one-tenth and write the corresponding fraction.		**3.5** The student will name and write the fractions represented by drawings or concrete materials and represent a given fraction, using concrete materials and symbols. **3.6** The student will compare the numerical value of two fractions having like and unlike denominators, using concrete materials. **3.7** The student will read and write decimals expressed as tenths and hundredths, using concrete materials.	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
	◆ Number & Number Sense		◆ Number & Number Sense		◆ Number & Number Sense		◆ Number & Number Sense	
Properties							**3.4** The student will recognize and use the inverse relationships between addition / subtraction and multiplication / division to complete basic fact sentences. Students will use these relationships to solve problems such as 5 + 3 = 8 and 8 – 3 = _____.	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
	◆**Computation & Estimation**		◆ **Computation & Estimation**		◆ **Computation & Estimation**		◆ **Computation & Estimation**	
Addition & Subtraction	**K.7** The student will add and subtract whole numbers using up to 10 concrete items.		**1.8** The student will recall basic addition facts, sums to 10 or less, and the corresponding subtraction facts. **1.9** The student will solve story and picture problems involving one-step solutions, using basic addition and subtraction facts.		**2.6** The student will recall basic addition facts, sums to 18 or less, and the corresponding subtraction facts. **2.7** The student, given two whole numbers whose sum is 99 or less, will a) estimate the sum; and b) find the sum using various methods of calculation (mental computation, concrete materials, and paper and pencil). **2.8** The student, given two whole numbers each 99 or less, will a) estimate the difference; and b) find the difference using various methods of calculation (mental computation, concrete materials, and paper pencil). **2.9** The student will solve addition and subtraction problems using data from simple charts and picture graphs. Problems will require a one-step solution		**3.8** The student will solve problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping, using various computational methods, including calculators, paper and pencil, mental computation, and estimation. **3.11** The student will add and subtract with proper fractions having like denominators of 10 or less, using concrete materials. **3.12** The student will add and subtract with decimals expressed as tenths, using concrete materials and paper and pencil. **3.13** The student will determine by counting the value of a collection of bills and coins up to $5.00, compare the value of the coins or bills, and make change.	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
	◆Computation & Estimation		◆ Computation & Estimation		◆ Computation & Estimation		◆ Computation & Estimation	
Addition & Subtraction					**2.10** The student, given a simple addition or subtraction fact, will recognize and describe the related facts which represent and describe the inverse relationship between addition and subtraction (e.g., 3 + __ = 7, ___ + 3 = 7, 7 - 3 = __, and 7 - __ = 3). **2.11** The student will a) count, compare, and make change, using a collection of coins and one-dollar bills; and b) identify the correct usage of the cent symbol (¢), dollar symbol ($), and decimal point (.).			
Multiplication & Division							**3.9** The student will recall the multiplication and division facts through the nines table. **3.10** The student will create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
Magnitude	**K.8** The student, given a familiar problem situation involving magnitude, will a) select a reasonable magnitude from three given quantities: a one-digit numeral, a two-digit numeral, and a three-numeral (e.g., 5, 50, and 500); and b) explain the reasonableness of his / her choice.							
	◆Measurement		**◆Measurement**		**◆Measurement**		**◆Measurement**	
Money	**K.9** The student will recognize a penny, nickel, dime, and quarter.		**1.10** The student will identify the number of pennies equivalent to a nickel, a dime, and a quarter.					
Time	**K.10** The student will identify the instruments used to measure time (clock: digital and analog; calendar: day, month, and season) **K.11** The student will tell time to the hour using an analog or digital clock.		**1.11** The student will tell time to the half-hour, using an analog or digital clock.		**2.16** The student will tell and write time to the quarter hour, using analog and digital clocks.		**3.15** The student will tell time to the nearest five-minute interval and to the nearest minute, using analog and digital clocks. **3.16** The student will identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours.	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
Temperature	**K.10** The student will identify the instruments used to measure temperature (thermometer). **K.12** The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, block, etc.						**3.17** The student will read temperature, to the nearest degree, from a Celsius thermometer and a Fahrenheit thermometer. Real thermometers and physical models of thermometers will be used.	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
	◆Measurement		◆Measurement		◆Measurement		◆Measurement	
Perimeter / Area					**2.12** The student will estimate and then use a ruler to make linear measurements to the nearest centimeter and inch, including the distance around a polygon (determine perimeter). **2.13** The student, given grid paper, will estimate and then count the number of square units needed to cover a given surface (determine area).			
Length	**K.10** The student will identify the instruments used to measure length (ruler) **K.12** The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: length (shorter, longer), height (taller, shorter) temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, block, etc.		**1.12** The student will use nonstandard units to measure length.		**2.12** The student will estimate and then use a ruler to make linear measurements to the nearest centimeter and inch, including the distance around a polygon (determine perimeter).		**3.14** The student will estimate and then use actual measuring devices with metric and U.S. Customary units to measure a) length—inches, feet, yards, centimeters, and meters;	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
	◆**Measurement**		◆**Measurement**		◆**Measurement**		◆**Measurement**	
Weight	**K.10** The student will identify the instruments used to measure weight (scale) **K.12** The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: weight (heavier, lighter), temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, block, etc.		**1.12** The student will use nonstandard units to measure weight. **1.14** The student will compare the weight of two objects using a balance scale.		**2.15** The student will estimate and then determine weight / mass of familiar objects in pounds and / or kilograms, using a scale.		**3.14** The student will estimate and then use actual measuring devices with metric and U.S. Customary units to measure b) weight / mass— ounces, pounds, grams, and kilograms	
Volume			**1.13** The student will compare the volumes of two given containers by using concrete materials (e.g., jelly beans, sand, water, and rice).		**2.14** The student will estimate and then count the number of cubes in a rectangular box (determine volume). **2.17** The student will use actual measuring devices to compare metric and U.S. Customary units (cups, pints, quarts, gallons, and liters) for measuring liquid volume, using the concepts of more, less, and equivalent.		**3.14** The student will estimate and then use actual measuring devices with metric and U.S. Customary units to measure c) liquid volume—cups, pints, quarts, gallons, and liters.	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
	◆Geometry		◆Geometry		◆Geometry		◆Geometry	
Properties of Plane & Solid Geometric Shapes	**K.13** The student will identify, describe, and make plane geometric figures (circle, triangle, square, and rectangle). **K.14** The student will identify representations of plane geometric figures (circle, triangle, square, and rectangle), regardless of their position and orientation in space. **K.15** The student will compare the size (larger / smaller) and shape of plane geometric figures (circle, triangle, square, and rectangle).		**1.15** The student will describe the proximity of objects in space (near, far, close by, below, up, down, beside, and next to). **1.16** The student will draw and describe triangles, squares, rectangles, and circles according to number of sides, corners, and square corners. **1.17** The student will identify and describe objects in his / her environment that depict geometric figures: triangle, rectangle, square, and circle.		**2.18** The student will identify and describe a cube, rectangular solid, sphere, cylinder, and cone, according to the number and shape of faces, edges, bases, and corners. **2.19** The student will identify and create figures, symmetric along a line, using various concrete materials. **2.20** The student will compare and contrast plane and solid geometric shapes (circle / sphere, square / cube, triangle / pyramid, and rectangle / rectangular solid).		**3.18** The student will analyze plane and solid geometric figures (square, rectangle, triangle, cube, rectangular solid, and cylinder) and identify relevant properties, including the number of corners, square corners, the shape of faces, and edges. **3.19** The student will identify and draw representations of line segments and angles, using a ruler or straightedge. **3.20** The student, given appropriate drawings or models, will identify and describe congruent and symmetrical two-dimensional figures, using tracing procedures.	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
	◆**Probability & Statistics**		◆**Probability & Statistics**		◆**Probability & Statistics**		◆**Probability & Statistics**	
Statistics	**K.16** The student will gather data relating to familiar experiences by counting and tallying. **K.17** The student will display objects and information, using object and pictorial graphs and tables.		**1.18** The student will investigate, identify, and describe various forms of data collection in his/her world (e.g., recording daily temperature, lunch count, attendance, and favorite ice cream). **1.19** The student will interpret information displayed in a picture or object graph using the vocabulary: more, less, fewer, greater than, and less than.		**2.21** The student will read, construct, and interpret a simple picture and bar graph. **2.22** The student, given a calendar, will determine past and future days of the week and identify specific dates.		**3.21** The student, given grid paper, will collect data on a given topic of his/her choice and construct a bar graph showing the results. A title and key will be included. **3.22** The student will read and interpret data represented in bar and picture graphs.	
Probability	**K.18** The student will investigate and describe the results of dropping a two-colored counter or using a multicolored spinner.				**2.23** The student will record data from experiments using spinners and colored tiles/cubes and use the data to predict which of two events is more likely to occur if the experiment is repeated.		**3.23** The student will investigate and describe the concept of probability as chance, and list possible results of a given situation.	

Big Idea	Grade K	Score	Grade 1	Score	Grade 2	Score	Grade 3	Score
	◆Patterns, Functions & Algebra		◆ Patterns, Functions & Algebra		◆ Patterns, Functions & Algebra		◆ Patterns, Functions & Algebra	
Classification	**K.19** The student will sort and classify objects according to similar attributes (size, shape, and color).		**1.20** The student will sort and classify concrete objects according to one or more attributes, including color, size, shape, and thickness.					
Patterns / Functions	**K.20** The student will identify, describe, and extend a repeating relationship (pattern) found in common objects, sounds, and movements.		**1.21** The student will recognize, describe, extend, and create a wide variety of patterns, including rhythmic, color, shape, and numeric. Patterns will include both growing and repeating patterns. Concrete materials and calculators will be used by students.		**2.24** The student will complete a sequence of 10 or fewer consecutive whole numbers 0 though 999. **2.25** The student will identify, create, and extend a wide variety of patterns using symbols and objects. **2.26** The student will solve problems by completing a numerical sentence involving the basic facts for addition and subtraction. Examples include: 3 + __ = 7, or 9 - __ = 2. Students will create story problems using the numerical sentences.		**3.24** The student will recognize and describe patterns formed using concrete objects, tables, and pictures and extend the pattern. **3.25** The student will analyze a given pattern formed using concrete objects and pictures and then create a pattern with the same attributes.	